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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/596,755	06/23/2006	Naomi Okamoto	9369-121US U01-209419C/KK	1202
570 7590 01/26/2009 PANITCH SCHWARZE BELISARIO & NADEL LLP ONE COMMERCE SQUARE 2005 MARKET STREET, SUITE 2200 PHILADELPHIA, PA 19103				
EXAMINER CHIN, HUI H				
ART UNIT 4131		PAPER NUMBER		
MAIL DATE 01/26/2009		DELIVERY MODE PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary****Application No.**

10/596,755

**Applicant(s)**

OKAMOTO ET AL.

**Examiner**

HUI CHIN

**Art Unit**

4131

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/86)  
Paper No(s)/Mail Date 7/19/2006, 5/22/2007
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 11, line 21, the recitation "high-molecular substance" causes indefiniteness because lack of definition for "high molecular".

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-14 are rejected under 35 U.S.C. 103(a) as obvious over Takeuchi et al. (JP 56109205) in view of Blok et al. (US Patent 6,350,807), and Nakamura et al. (JP 2000044633).

Takeuchi et al. disclose a rubber composition and a tire made from the rubber composition, containing a 2-40% content of a 1,2-polybutadiene with a melting point of 180 – 220°C, and a cis-1,4-polyisoprene or natural rubber (claim), wherein the 1,2-polybutadiene is finely (micro) dispersed in the cis-1,4-polybutadiene or natural rubber

matrix (first paragraph on page 10 in translation). This rubber can further be blended with natural rubber or isoprene rubber for tire applications (Table 3 Working Example 3, second paragraph on page 10 in translation, first paragraph on page 3 in translation).

However, Takeuchi et al. are silent on (A) the silica to be added and (B) the fiber form of polybutadiene used in the invention.

Referring to (A), Blok et al. disclose a rubber composition containing polyisoprene rubber, butadiene rubber, and 30 to 60 phr of silica (claim 1) to provide traction, treadwear and rolling resistance characteristics for tires (abstract).

Referring to (B), Nakamura et al. disclose a rubber composition comprising vinyl-cis-butadiene, wherein the polybutadiene are in fiber form (claim 3) to provide high hardness and high tensile strength for automobile tire ([0034]).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the rubber composition including silica and polybutadiene in short fiber form with the expected success.

The limitations of claims 2-7 can be found in Takeuchi et al. at abstract and first paragraph on page 3 in translation, where it discloses the tire applications, improved property to tire cord and high hardness.

The limitations of claim 8 can be found in Takeuchi et al. at Example 1, where it discloses the process.

The limitations of claim 9 can be found in Takeuchi et al. at Example 3, where it discloses 20% by weight of natural rubber.

The limitations of claim 10 can be found in Nakamura et al. at Claim 3, where it discloses fiber length less than 0.6  $\mu\text{m}$ .

The limitations of claim 11 can be found in Nakamura et al. at Claim 3, where it discloses Mooney viscosity of 30, viscosity in toluene of 62, 1,4-structure of 98.5%, and boiling n-hexane insoluble matter ([0025], claim 3).

The limitations of claims 12 and 13 can be found in Takeuchi et al. at Claim 1, where it discloses the polyisoprene.

The limitations of claim 14 can be found in Takeuchi et al. at Example 1, where it discloses carbon black.

### ***Conclusion***

The examiner noted some errors in the instant patent application publication (US 20070155889) (e.g. [0010], [0011], [0161], and [0162]).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUI CHIN whose telephone number is (571)270-7350. The examiner can normally be reached on Monday to Friday; 8:00am - 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on 571-272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ling-Siu Choi/  
Primary Examiner, Art Unit 1796

HC